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Valvular Heart Disease

TRANSCATHETER AORTIC VALVE IN VALVE REPLACEMENT FOR DEGENERATIVE AORTIC BIOPROSTHESIS: INITIAL RESULTS FROM THE STS/ACC TRANSCATHETER VALVE THERAPY REGISTRY

Oral Contributions
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Background: Transcatheter aortic valve-in-valve replacement (ViV-TAVR) is a promising treatment modality for patients with degenerated aortic valve bioprosthesis. We evaluated the outcomes of ViV-TAVR in current US clinical practice.

Methods: In-hospital outcomes of all patients who underwent ViV-TAVR using the commercially approved Edwards Sapien valve entered into the STS/ACC Transcatheter Valve Therapy (TVT) Registry were analyzed.

Results: Between 11/2011 - 6/2013, 121 patients (age 77.7 (IQR 69,84) years; 61% men) underwent ViV-TAVR. Of the 121 patients, 35 (29.9%) were inoperable, 86 (69.1%) were operable but deemed to be high risk. The predicted Society of Thoracic Surgery perioperative mortality risk score was 8.0% (5.0%,11.1%). The observed in hospital mortality was 4.7%, with observed to expected ratio of 0.59. Other adverse in-hospital outcomes included stroke 3.3%, major vascular complication 4.1%, major bleeding 5.2%, and need for a new permanent pacemaker 3.3%. Of the 97 (80%) patients with an evaluable post-TAVR echocardiogram, 76 (78.4%) had no or trace, 16 (16.5%) had mild and 5 (5.1%) had moderate aortic regurgitation. Of 84 patients with evaluable transvalvular gradient measurements, the mean gradient was >25 mmHg in 21 (25%) patients.

Conclusions: Initial data from the TVT Registry suggests that in current clinical practice, ViV-TAVR has a reasonble safety and effectiveness profile in patients with degenerated aortic bioprosthesis who are inoperable or high risk for standard open aortic valve replacement. Further study is needed to define determinants of outcomes including high residual gradients, and longer term outcomes.